

CLAIMS:

What is claimed is:

1. An electrical connector comprising:

a shield case for covering an insulative housing mounting a plurality of terminals, each of the terminals having a contact piece and a terminal piece, at least a portion of the terminal piece extending from the insulative housing in a direction away from the contact piece, the terminal piece being capable of being connected to an electric wire of a cable;

an over-molding portion for securing the shield case along with the cable to shape the electrical connector;

the shield casing having a tube-like portion engaging with a portion of the insulative housing and a box-like portion internally receiving at least a portion of the terminal piece and the electrical wire of the cable;

the tube-like portion and the box-like portion being connected via a continuous piece, the tube-like portion including a bending piece externally projecting from an edge of the tube like portion, the continuous piece and the bending piece being embedded in the over-molding portion.

2. An electrical connector as set forth in claim 1, wherein the tube-like portion is a quadrangular tube-like portion, wherein one wall being continuous with the box-like portion via the continuous piece, and three walls being provided projecting the bending piece.

3. An electrical connector as set forth in claim 1 or 2, wherein the continuous piece is bended to make the center of the quadrangular tube-like portion substantially consistent with that of the box-like portion.

4. An electrical connector as set forth in claim 1 or 2, wherein the electrical connector is formed into a L-shape configuration in which the direction of extension of the cable is intersected with the direction of extension of a mating end of the insulative housing surrounded by the shield case at approximately right angle.

5. An electrical connector comprising:

a shield case for covering an insulative housing mounting a plurality of terminals,

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each of the terminals having a contact piece and a terminal piece, at least a portion of the terminal piece extending from the insulative housing in a direction away from the contact piece, the terminal piece being capable of being connected to an electric wire of a cable;

an over-molding portion for securing the shield case along with the cable to shape the electrical connector;

the shield casing having a tube-like portion engaging with a portion of the insulative housing and a box-like portion internally receiving at least a portion of the terminal piece and the electrical wire of the cable;

a shield cap mounted on the shield body,

a strip tab extending from the box-like portion, an end portion of the strip tab being provided with a cable clamp, a depending piece extending from the shield cap, and a cable holder being provided at the end portion of the depending piece, and

the cable clamp commonly clamping the cable and the cable holder.

6. An electrical connector as set forth in claim 5, wherein the shield cap is formed with a quadrangular plate smaller than an opening portion of an end portion of the box-like portion, bent continuous pieces extending from an upper edge and a side edge of the quadrangular plate, and the depending piece depending from a lower edge of the quadrangular piece, and a gap being formed between the upper connecting piece and the lateral connecting pieces, and between the depending piece and the lateral connecting pieces.

7. An electrical connector as set forth in claim 6, wherein the quadrangular plate of the shield cap, the continuous pieces and the depending piece closes the end opening portion formed in the box-like portion of the shield body.

8. An electrical connector as set forth in any one of claims 5 to 7, wherein the tube-like portion and the box-like portion are continuous via the continuous piece, a bending piece extends externally from the end edge of the tube-like portion, the continuous piece and the bending piece are embedded in the over-molding portion, and resins of the bending portion and the over-molding portion are engaged.

9. An electrical connector as set forth in claim 8, wherein the tube-like portion is a quadrangular tube-like portion, wherein one wall being continuous with the box-like portion via the continuous piece, and three walls being provided projecting the bending piece.

10. An electrical connector as set forth in claim 8, wherein the continuous piece is bended to make the center of the quadrangular tube-like portion substantially consistent with that of the box-like portion.

11. An electrical connector as set forth in claim 8, wherein the electrical connector is formed into a L-shape configuration in which the direction of extension of the cable is intersected with the direction of extension of a mating end of the insulative housing surrounded by the shield case at approximately right angle.

12. An electrical connector comprising:
a shield case for covering an insulative housing mounting a plurality of terminals, each of the terminals connected to an electric wire of a cable;
an over-molding portion for securing the shield case along with the cable to shape the electrical connector;
the insulative housing including a housing body formed with terminal receiving spaces, and a housing cap formed with terminal insertion holes;
rear end opening portions of the terminal receiving spaces formed in the housing body being sealed by the housing cap; and
terminal pieces of the terminals mounted in the terminal receiving spaces rearwardly extending through the terminal insertion holes of the housing cap.

13. An electrical connector as set forth in claim 12, wherein the housing body includes a rear end surface having openings for the terminal receiving spaces, and the housing cap includes an abutting surface for abutting against the rear end surface, so that the rear end opening portions of the terminal receiving spaces are sealed by abutting the abutting surface against the rear end surface.

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14. An electrical connector as set forth in claim 12, wherein the housing cap includes a supporting surface for supporting terminal pieces rearwardly exposing through the terminal insertion holes.

15. An electrical connector as set forth in claim 14, wherein the supporting surface includes separation projections for isolating adjacent terminal pieces.

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AMENDED CLAIMS

[Received by the International Bureau on 13 January 2004 (13.01.04): original claims 5 and 12 amended; claims 2-4, 13-15 remain unchanged; (3 pages)]

1. An electrical connector comprising:

a shield case for covering an insulative housing mounting a plurality of terminals, each of the terminals having a contact piece and a terminal piece, at least a portion of the terminal piece extending from the insulative housing in a direction away from the contact piece, the terminal piece being capable of being connected to an electric wire of a cable; an over-molding portion for securing the shield case along with the cable to shape the electrical connector;

the shield casing having a tube-like portion engaging with a portion of the insulative housing and a box-like portion internally receiving at least a portion of the terminal piece and the electrical wire of the cable;

the tube-like portion and the box-like portion being connected via a continuous piece, the tube-like portion including a bending piece externally projecting from an edge of the tube like portion, the continuous piece and the bending piece being embedded in the over-molding portion.

2. An electrical connector as set forth in claim 1, wherein the tube-like portion is a quadrangular tube-like portion, wherein one wall being continuous with the box-like portion via the continuous piece, and three walls being provided projecting the bending piece.

3. An electrical connector as set forth in claim 1 or 2, wherein the continuous piece is bended to make the center of the quadrangular tube-like portion substantially consistent with that of the box-like portion.

4. An electrical connector as set forth in claim 1 or 2, wherein the electrical connector is formed into a L-shape configuration in which the direction of extension of the cable is intersected with the direction of extension of a mating end of the insulative housing surrounded by the shield case at approximately right angle.

5. An electrical connector as set forth in claim 1, comprising:

a shield cap mounted on the shield body,

a strip tab extending from the box-like portion, an end portion of the strip tab being

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provided with a cable clamp, a depending piece extending from the shield cap, and a cable holder being provided at the end portion of the depending piece, and
the cable clamp commonly clamping the cable and the cable holder.

6. An electrical connector as set forth in claim 5, wherein the shield cap is formed with a quadrangular plate smaller than an opening portion of an end portion of the box-like portion, bent continuous pieces extending from an upper edge and a side edge of the quadrangular plate, and the depending piece depending from a lower edge of the quadrangular piece, and a gap being formed between the upper connecting piece and the lateral connecting pieces, and between the depending piece and the lateral connecting pieces.

7. An electrical connector as set forth in claim 6, wherein the quadrangular plate of the shield cap, the continuous pieces and the depending piece closes the end opening portion formed in the box-like portion of the shield body.

8. An electrical connector as set forth in any one of claims 5 to 7, wherein the tube-like portion and the box-like portion are continuous via the continuous piece, a bending piece extends externally from the end edge of the tube-like portion, the continuous piece and the bending piece are embedded in the over-molding portion, and resins of the bending portion and the over-molding portion are engaged.

9. An electrical connector as set forth in claim 8, wherein the tube-like portion is a quadrangular tube-like portion, wherein one wall being continuous with the box-like portion via the continuous piece, and three walls being provided projecting the bending piece.

10. An electrical connector as set forth in claim 8, wherein the continuous piece is bended to make the center of the quadrangular tube-like portion substantially consistent with that of the box-like portion.

11. An electrical connector as set forth in claim 8, wherein the electrical connector is formed into a L-shape configuration in which the direction of extension of the cable is intersected with the direction of extension of a mating end of the insulative housing surrounded by the shield case at approximately right angle.

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12. An electrical connector as set forth in claim 1, wherein the insulative housing includes a housing body formed with terminal receiving spaces, and a housing cap formed with terminal insertion holes;

rear end opening portions of the terminal receiving spaces formed in the housing body being sealed by the housing cap; and

terminal pieces of the terminals mounted in the terminal receiving spaces rearwardly extending through the terminal insertion holes of the housing cap.

13. An electrical connector as set forth in claim 12, wherein the housing body includes a rear end surface having openings for the terminal receiving spaces, and the housing cap includes an abutting surface for abutting against the rear end surface, so that the rear end opening portions of the terminal receiving spaces are sealed by abutting the abutting surface against the rear end surface.

14. An electrical connector as set forth in claim 12, wherein the housing cap includes a supporting surface for supporting terminal pieces rearwardly exposing through the terminal insertion holes.

15. An electrical connector as set forth in claim 14, wherein the supporting surface includes separation projections for isolating adjacent terminal pieces.

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